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Patent Abstracts of Japa

PUBLICATION NUMBER : 10047210
PUBLICATION DATE : 17-02-98

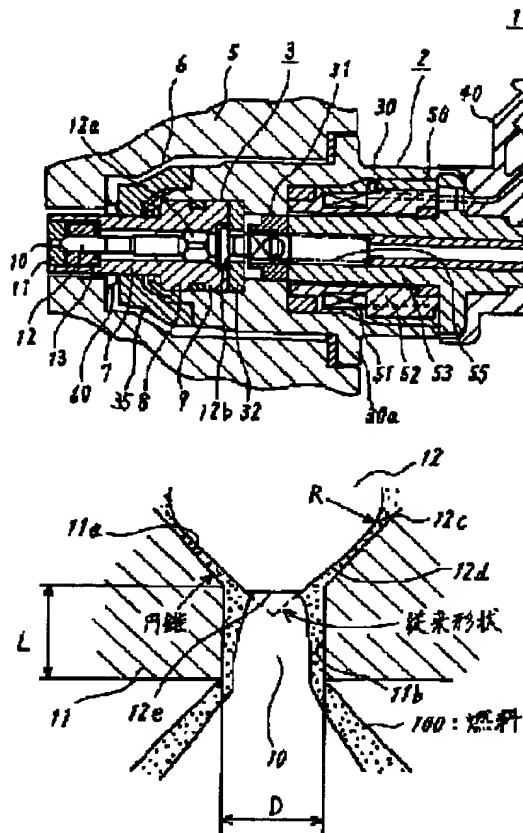
APPLICATION DATE : 29-07-96
APPLICATION NUMBER : 08198851

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INT.CL. : F02M 61/18 F02M 61/18 F02M 61/18
F02M 51/08

TITLE : FUEL INJECTION VALVE



ABSTRACT : PROBLEM TO BE SOLVED: To prevent sticking of carbon or the like to a tip part of a needle valve, and prevent a change in an injection shape or the like by forming a plane part in the tip part of the needle valve in a fuel injection valve having a turning means to impart turning motion to fuel in the upstream of a contact part between a valve seat and the needle valve to open and close an injection hole.

SOLUTION: A valve device 3 in a fuel injection valve 1 for cylinder injection is provided with a needle valve 12 to open and close a fuel injection hole 10 by separating from and contacting with a valve seat 11 by a solenoid device 50 in a stepped hollow cylindrical valve main body 9 and a turning body 13 which guides the needle valve 12 in the shaft direction and imparts turning motion to fuel going to flow in the fuel injection hole 10 of the valve seat 11 inward in the radial direction. In this case, a tip part of the needle valve 12 is formed by arranging a seat part 12c to come into contact with the valve seat 11 having roundness, a conical part 12d extending toward the tip part from this seat part 12c and a plane part 12e by cutting off the tip part of this conical part 12d in the almost vertical direction to the injection hole 10, and sticking of carbon or the like is restrained.

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